

Claims

What is claimed is

1. A printed circuit board structure with internal signal traces on a thin dielectric layer suspended in air between two flat metal plates, said suspension in air is accomplished by indentation of the flat metal plates above and below the trace to a distance away from the edges of the trace, leaving the remainder of the metal away from the indentation to act as a spacer, said indented area is referred to as a "channel".

7. The printed circuit board of claim 1 with dielectric layer strong enough to support the trace between the spacing layers but thin enough to minimize the effect it will have on the composite dielectric constant including the air between the trace and the external conductive planes.

13. The printed circuit board of claim 1 will be 4 or 5 mils thick spacers, conductive layers will be about 1 mil thick, copper trace will be about 1 mils thick and the overall section will be about 12 mils.

14. The printed circuit board (PCB) of claim 1 wherein channels in the metal plates noted above may be extended to the edges of the PCB or to holes to the surface to provide for air escape or inflow if temperature or altitude changes might cause compression or expansion of trapped air and de-lamination.

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